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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,095	01/16/2002	Masaru Deguchi	Q68077	2414

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EXAMINER	
NGUYEN, PHUONGCHI T	
ART UNIT	**PAPER NUMBER**
2833	

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/046,095	DEGUCHI, MASARU	
	Examiner	Art Unit	
	Phuongchi Nguyen	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 May 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20-27,31 and 32* is/are allowed.

6)☒ Claim(s) *1-13, 28-30 and 34* is/are rejected.

7)☒ Claim(s) *14-19,33 and 35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant's amendment of May 28, 2004 is acknowledged. It is noted that claims 28, 29 and 30 are amended. New claims 31-35 are added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.
> The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claim 1-6, 8-11, 13, 28-30 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirzmann (US6535394B1).

In regard to claim 1, Hirzmann discloses (figure 3) a ground connection structure (Hirzmann's apparatus has the same basic structure as applicant's ground connection; thus Hirzmann's apparatus carries the same function as Applicant's earth connection) comprising a substrate (100), on whose surface ground is formed; a ground connecting member (300, 320, 310) which is connected to the ground; and a compensating member (110) which compensates for an area of the ground and is joined to the substrate (100) such that the ground connecting member (300, 320, 310) is sandwiched between the compensating member (110) and the substrate (100), and wherein the ground connecting member (300, 320, 310) extends from the substrate (100) toward the compensating member (110) directly (contacts by engaging surfaces of 300 and 110) resiliently contacts (by the spring 320) the compensating member (110), and electrically connects the ground with the compensating member (110) in a low impedance state.

In regard to claims 2 and 8, Hirzmann discloses (figure 3) the ground -connecting member (300, 320, 310) wherein a base (300) connected to the ground; and an elastic spacer (320) arranged on the base (300), and by being sandwiched between the substrate (100) and the compensating member (110).

In regard to claim 3, Hirzmann discloses (figure 3) the ground connection structure wherein the substrate (100) has at least one through-hole (where 310 going through) for fixing the ground connecting member (300, 310, 320) on the substrate (100); and the base (300) includes at least one lead (310), which is inserted into the at least one through hole (where 310 going through on 100) and connected to the ground.

In regard to claim 4 and 9, Hirzmann discloses (figure 3) the ground connection structure wherein the at least one lead (310) has elasticity and a protruding portion (thread of screw 310) for fixing the ground connecting member (300, 310, 320) onto the substrate (100).

In regard to claims 5 and 10, Hirzmann discloses (figure 3) the ground connection structure wherein the base (300) has at least one lead (310) having a margin, left (surface on 310) for being connected to the ground and formed in parallel with surface (along the through hole inside 100) of the ground.

In regard to claims 6 and 11, Hirzmann discloses (figure 3) the ground connection structure wherein the spacer (320) includes a plate spring.

In regard to claim 13, Hirzmann discloses (figure 3) a ground connection method comprising connecting a ground connecting member (300, 310, 320) having elasticity and conductivity, to ground formed on a substrate (100); and arranging a compensating member (110) for compensating for an area of the ground, on the substrate (100) such that the ground

connecting member (300, 310, 320) extends from the substrate (100) toward the compensating member (110) directly (contacts by engaging surfaces of 300 and 110) resiliently contacts (by the spring 320) the compensating member (110) and is sandwiched between the compensating member (110) and the substrate (100), thereby electrically connecting the ground and the compensating member (110) via the ground connecting member (300, 310, 320) in a low impedance state.

In regard to claims 28, 29 and 30, Hirzmann discloses the ground connection structure wherein the entire structure of the ground connecting member structure is located on one side of the compensating member (110) (figure 3).

Claim 34 is rejected for the same reason of claim 2.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being obvious over Hirzmann (US6535394B1).

In regard to claims 7 and 12, Hirzmann discloses the invention, but lacks a spacer to be a coil spring. It would have been obvious to one having ordinary skill at the time the invention was made to modify the plate spring spacer of Hirzmann with a coil spring; since the examiner Takes Official Notice of the equivalence of the plate spring for their use in the earth connection

structure art and the selection of any of these known equivalents to the coil spring would be within the level of ordinary skill in the art.

Allowable Subject Matter

6. Claims 20-27 are allowed.

7. Claims 14-19, 31-33 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 14, 33 and 35, the prior art fail to teach or suggest the ground connecting structure wherein the compensating member is contacted direct by the spacer.

In regard to claim 15, the prior art fail to teach or suggest the ground connecting structure wherein the spacer is arranged between the lead and the base, and electrically connects the base section and the compensating member.

In regard to claim 18, the prior art fail to teach or suggest the ground connecting structure wherein a protruding section integral to the distal end of one of the plurality of leads; and mechanically fixes the substrate between the protruding section and the base section, so that no solder is required to connect the one of the plurality of leads to the ground.

In regard to claims 31 and 32, the prior art fail to teach or suggest the ground-connecting member comprises a proximal end fixed to the substrate, and an elastic distal end directly resiliently contacting the compensating member.

Response to Arguments

9. Applicant's argument of " Hirzmann fails to teach or suggest that the ground connecting member "extend from said substrate toward said compensating member and ...directly resiliently contacts said compensating member" is not deem persuasive; because the ground connecting member (310, 320, 300) of Hirzmann does extend from the substrate (100) toward the compensating member (110) directly (contacts by engaging surfaces of 300 and 110) resiliently contacts (by the spring 320) the compensating member (110) as shown in figure 3.

10. Applicant's argument of " the combination of fixing post 300, slot 310 and slit washer 320 is fixed to casing 110 by a screw, not by any resilient contact" is not deem persuasive; because the slit washer 320 is leaf spring and a spring is a resilient member; thus, the combination of fixing post 300, slot 310 and slit washer 320 is resiliently fixed to casing 110 by the resilient contact 320.

11. Applicant's argument of "slit washer 320 does not contact any portion of casing 110, and thus cannot provide a direct resilient contact against casing 110" is not deem persuasive. Claims 1 and 13 recited, "the ground connecting member ... directly resiliently contacts said compensating member". The ground-connecting member is defined by three elements 310, 320, 300. And the ground connecting member (310, 320, 300) of Hirzmann is directly (contacts by engaging surfaces of 300 and 110) resiliently contacts (by the spring 320) the compensating member (110).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (703) 305-0729. The examiner can normally be reached on Monday through Thursday from 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (703) 308 - 2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7723 for regular communications and (703) 305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

PCN

June 15, 2004

P. Bradley

P. AUSTIN BRADLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

[redacted]